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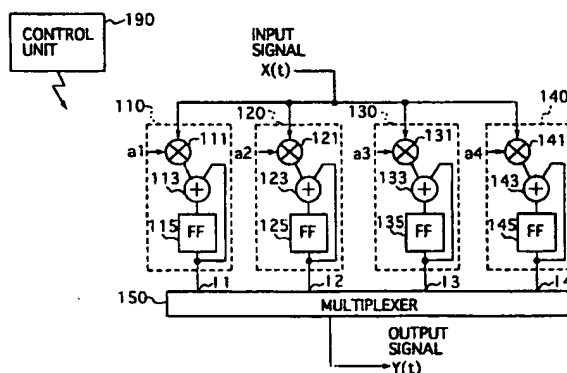
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(54) **Matched filter and method of phase synchronization in a receiver**

(57) Herein disclosed is a matched filter for synchronizing a phase of an input wave signal with that of a desired wave signal, thereby making it possible to decrease the power consumption. The matched filter comprises a plurality of correlation units (110,120,130,140) each having a multiplier (111,121,131,141) and an integrator (113,115;123,125;133,135;141,145). The multiplier of each correlation units is designed to multiply an input signal ( $X(t)$ ) by a predetermined coefficient ( $a_1, a_2, a_3, a_4$ ) at predetermined intervals in a predetermined operation cycle of the matched filter. The coefficient ( $a_1, a_2, a_3, a_4$ ) sequentially varies at the intervals. The integrator (113,115;123,125;133,135;141,145) of

each correlation units is designed to integrate the product obtained by the multiplier (111,121,131,141) over the operation cycle into a correlation value. The matched filter further comprises control means (190) and a multiplexer (150). The control means (190) is designed to output a plurality of control signals at the intervals to direct the correlation units (110,120,130,140) respectively, to start operating. The multiplexer (150) electrically connected to the correlation units (110,120,130,140) for inputting the correlation values and sequentially outputting one of the correlation values in response to the control signal and resetting the one correlation value.

FIG.1





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# EUROPEAN SEARCH REPORT

Application Number  
EP 98 30 4535

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The present search report has been drawn up for all claims			
Place of search MUNICH		Date of completion of the search 7 August 2002	Examiner Giglietto, M
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# EUROPEAN SEARCH REPORT

Application Number  
EP 98 30 4535

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
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			TECHNICAL FIELDS SEARCHED (Int.Cl.6)
The present search report has been drawn up for all claims			
Place of search: <b>MUNICH</b>		Date of completion of the search: <b>7 August 2002</b>	Examiner: <b>Giglietto, M</b>
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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82